Title (en)

Control unit for internal combustion engine

Title (de)

Steuereinheit für einen Verbrennungsmotor

Title (fr)

Unité de contrôle pour moteur à combustion interne

Publication

EP 2053225 A2 20090429 (EN)

Application

EP 08018562 A 20081023

Priority

JP 2007278772 A 20071026

Abstract (en)

There is proposed a control unit for an internal combustion engine, which comprises a boost circuit, a switching element (21), a current detecting resistor (20) and a controller (14) and is designed to be actuated such that the boost circuit is used to boost a power source voltage (VB) to create a boosted voltage (VH), and the controller (14) is used to control the switching element (21) so as to enable the boosted voltage (VH) to flow to the injector solenoid coil (25). This control unit is designed such that, when the boost circuit goes out of order, the injector solenoid coil (25) is excited by making use of the power source voltage (VB) without using the boosted voltage (VH) and without creating a peak current to thereby generate a first holding current required for opening the injector and a second holding current required for retaining the opened state of the injector, the second holding current being lower in intensity than the first holding current.

IPC 8 full level

F02D 41/20 (2006.01); **F02D 41/22** (2006.01)

CPC (source: EP US)

F02D 41/20 (2013.01 - EP US); **F02D 41/221** (2013.01 - EP US); F02D 2041/2013 (2013.01 - EP US); F02D 2041/2044 (2013.01 - EP US); F02D 2041/2058 (2013.01 - EP US); F02D 2041/2093 (2013.01 - EP US); F02D 2041/227 (2013.01 - EP US); Y02T 10/40 (2013.01 - EP US)

Citation (applicant)

- JP 2003027994 A 20030129 - HITACHI LTD, et al
- JP 2004124890 A 20040422 - HITACHI LTD

Cited by

EP3514358A1; US11867314B2

Designated contracting state (EPC)

DE FR GB IT

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2053225 A2 20090429; **EP 2053225 A3 20170503**; **EP 2053225 B1 20180627**; CN 101418738 A 20090429; CN 101418738 B 20120822; JP 2009108686 A 20090521; JP 4871245 B2 20120208; US 2009107469 A1 20090430; US 7784445 B2 20100831

DOCDB simple family (application)

EP 08018562 A 20081023; CN 200810170072 A 20081022; JP 2007278772 A 20071026; US 25707408 A 20081023